Claims

1. A composition formulated for topical administration comprising from 0.0001% to 5% (w/w) oxidatively transformed carotenoid.

2. The composition of claim 1, further comprising an antioxidant.

3. The composition of claim 2, wherein said antioxidant is selected from thiols, sulphoximines, metal chelators, fatty acids, vitamins, phenols, stilbenes, uric acid, mannose, selenium and propyl gallate.

4. The composition of claim 3, wherein said antioxidant is vitamin E.

5. The composition of claim 1, further comprising one or more solubilizing excipients wherein the class of excipient is selected from the group consisting of polyethoxylated fatty acids, PEG-fatty acid diesters, PEG-fatty acid mono-ester and di-ester mixtures, polyethylene glycol glycerol fatty acid esters, alcohol-oil transesterification products, polyglycerized fatty acids, propylene glycol fatty acid esters, mixtures of propylene glycol esters-glycerol esters, mono- and diglycerides, sterol and sterol derivatives, polyethylene glycol sorbitan fatty acid esters, polyethylene glycol alkyl ethers, sugar esters, polyethylene glycol alkyl phenols, polyoxyethylene-polyoxypropylene block copolymers, sorbitan fatty acid esters, lower alcohol fatty acid esters, ionic surfactants, tocopherol esters, and sterol esters.

6. The composition of claim 1, further comprising a UV light blocker, a corticosteroid, an antihistamine, a retinoid, 5-fluorouracil, epinephrine, anthralin, calcipotriene, methotrexate, masprocol, trimethaxate gluconate, cyclosporin, paclitaxel, 5-amino levulinic acid, bergasol, benzoporphyrin, hydroxy acid, retinoic acid, diphencyprone, aldara, imiquimod, gamma-linolenic acid, chloroxine, coal tar, ketoconazole, pyrithione, salicylic acid, zinc salts, selenium sulfide, piroctone olamine, sulphur, or mixtures thereof.

7. The composition of claim 6, wherein said UV light blocker is from a class selected from amino benzoic acids, benzophenones, camphors, cinnamates, dibenzoyl methanes, salicylates, metal oxides, and mixtures thereof.

8. The composition of claim 6, wherein said antihistamine is mepyramine, diphenhydramine, or antazoline.

9. The composition of claim 6, wherein said corticosteroid is alclometasone dipropionate, amcinonide, betamethasone dipropionate, betamethasone valerate, clobetasol propionate, desonide, desoximetasone, dexamethasone, diflorasone diacetate, flucinolone acetonide, flumethasone, fluocinonide, flurandrenolide, halcinonide, halobetasol propionate, hydrocortisone butyrate, hydrocortisone valerate, methylprednisolone, mometasone furoate, prednisolone, or triamcinolone acetonide.

10. The composition of claim 1, wherein said composition is formulated as a cream, lotion, spray, stick, ointment, soap, body wash, shampoo, or mask.

11. A composition formulated for topical administration comprising from 0.0001% to 5% (w/w) 2-methyl-6-oxo-2,4-heptadienal.

12. The composition of claim 11, further comprising an antioxidant.

13. The composition of claim 12, wherein said antioxidant is selected from thiols, sulphoximines, metal chelators, fatty acids, vitamins, phenols, stilbenes, uric acid, mannose, selenium and propyl gallate.

14. The composition of claim 13, wherein said antioxidant is vitamin E.

15. The composition of claim 11, further comprising one or more solubilizing excipients wherein the class of excipient is selected from the group consisting of polyethoxylated fatty acids, PEG-fatty acid diesters, PEG-fatty acid mono-ester and di-ester mixtures, polyethylene glycol glycerol fatty acid esters, alcohol-oil transesterification products, polyglycerized fatty acids, propylene glycol fatty acid esters, mixtures of propylene glycol esters-glycerol esters, mono- and diglycerides, sterol and sterol derivatives, polyethylene glycol sorbitan fatty acid esters, polyethylene glycol alkyl ethers, sugar esters, polyethylene glycol alkyl phenols, polyoxyethylene-polyoxypropylene block copolymers, sorbitan fatty acid esters, lower alcohol fatty acid esters, ionic surfactants, tocopherol esters, and sterol esters.

16. The composition of claim 11, further comprising a UV light blocker, a corticosteroid, an antihistamine, a retinoid, 5-fluorouracil, epinephrine, anthralin, calcipotriene, methotrexate, masprocol, trimethaxate gluconate, cyclosporin, paclitaxel, 5-amino levulinic acid, bergasol, benzoporphyrin, hydroxy acid, retinoic acid, diphencyprone, aldara, imiquimod, gamma-linolenic acid, chloroxine, coal tar, ketoconazole, pyrithione, salicylic acid, zinc salts, selenium sulfide, piroctone olamine, sulphur, or mixtures thereof.

17. The composition of claim 16, wherein said UV light blocker is from a class selected from amino benzoic acids, benzophenones, camphors, cinnamates, dibenzoyl methanes, salicylates, metal oxides, and mixtures thereof.

18. The composition of claim 16, wherein said antihistamine is mepyramine, diphenhydramine, or antazoline.

19. The composition of claim 16, wherein said corticosteroid is alclometasone dipropionate, amcinonide, betamethasone dipropionate, betamethasone valerate, clobetasol propionate, desonide, desoximetasone, dexamethasone, diflorasone diacetate, flucinolone acetonide, flumethasone, fluocinonide, flurandrenolide, halcinonide, halobetasol propionate, hydrocortisone butyrate, hydrocortisone valerate, methylprednisolone, mometasone furoate, prednisolone, or triamcinolone acetonide.

20. The composition of claim 11, wherein said composition is formulated as a cream, lotion, spray, stick, ointment, soap, body wash, shampoo, or mask.

21. A method of treating a skin condition in a mammal, said method comprising the step of applying a composition of claim 1 to the skin of said mammal in an amount sufficient to treat said skin condition.

22. The method of claim 21, wherein said skin condition is dandruff.

23. The method of claim 22, further comprising the administration of chloroxine, coal tar, ketoconazole, pyrithione, salicylic acid, zinc salts, selenium sulfide, piroctone olamine, sulphur, or combination thereof to said mammal.

24. The method of claim 21, wherein said skin condition is psoriasis.

25. The method of claim 24, further comprising the administration of a corticosteroid, 5-fluorouracil, epinephrine, anthralin, calcipotriene, methotrexate, masprocol, trimethaxate gluconate, retinoids, cyclosporin, paclitaxel, 5-amino levulinic acid, bergasol, benzoporphyrin, or combinatinon thereof to said mammal.

26. The method of claim 21, wherein said skin condition is photoaging.

27. The method of claim 26, further comprising the administration of a UV light blocker, hydroxy acid, retinoic acid, gamma-linolenic acid, or combination thereof to said mammal.

28. The method of claim 21, wherein said skin condition is eczema.

29. The method of claim 28, further comprising the administration of an antihistamine, corticosteroid, or combination thereof to said mammal.

30. The method of claims 25 or 29, wherein said corticosteroid is alclometasone dipropionate, amcinonide, betamethasone dipropionate, betamethasone valerate, clobetasol propionate, desonide, desoximetasone, dexamethasone, diflorasone diacetate, flucinolone acetonide, flumethasone, fluocinonide, flurandrenolide, halcinonide, halobetasol propionate, hydrocortisone butyrate, hydrocortisone valerate, methylprednisolone, mometasone furoate, prednisolone, or triamcinolone acetonide.

31. The method of claim 29, wherein said antihistamine is mepyramine, diphenhydramine, or antazoline.

32. The method of claim 21, wherein said skin condition is selected from warts, keloids, and keratosis.

33. A method of treating a skin condition in a mammal, said method comprising the step of applying a composition of claim 11 to the skin of said mammal in an amount sufficient to treat said skin condition.

34. The method of claim 33, wherein said skin condition is dandruff.

35. The method of claim 34, further comprising the administration of chloroxine, coal tar, ketoconazole, pyrithione, salicylic acid, zinc salts, selenium sulfide, piroctone olamine, sulphur, or combination thereof to said mammal.

36. The method of claim 33, wherein said skin condition is psoriasis.

37. The method of claim 36, further comprising the administration of a corticosteroid, 5-fluorouracil, epinephrine, anthralin, calcipotriene, methotrexate, masprocol, trimethaxate gluconate, retinoids, cyclosporin, paclitaxel, 5-amino levulinic acid, bergasol, benzoporphyrin, or combinatinon thereof to said mammal.

38. The method of claim 33, wherein said skin condition is photoaging.

39. The method of claim 38, further comprising the administration of a UV light blocker, hydroxy acid, retinoic acid, gamma-linolenic acid, or combination thereof to said mammal.

40. The method of claim 33, wherein said skin condition is eczema.

41. The method of claim 40, further comprising the administration of an antihistamine, corticosteroid, or combination thereof to said mammal.

42. The method of claims 37 or 41, wherein said corticosteroid is alclometasone dipropionate, amcinonide, betamethasone dipropionate, betamethasone valerate, clobetasol propionate, desonide, desoximetasone, dexamethasone, diflorasone diacetate, flucinolone acetonide, flumethasone, fluocinonide, flurandrenolide, halcinonide, halobetasol propionate, hydrocortisone butyrate, hydrocortisone valerate, methylprednisolone, mometasone furoate, prednisolone, or triamcinolone acetonide.

43. The method of claim 41, wherein said antihistamine is mepyramine, diphenhydramine, or antazoline.

44. The method of claim 33, wherein said skin condition is selected from warts, keloids, and keratosis.

45. A container comprising an atmosphere purged of oxygen gas and a composition comprising from 0.0001% to 5% (w/w) oxidatively transformed carotenoid, wherein said composition formulated for topical administration.

46. A container comprising an atmosphere purged of oxygen gas and a composition comprising from 0.0001% to 5% (w/w) 2-methyl-6-oxo-2,4-heptadienal, wherein said composition formulated for topical administration.

47. A composition comprising 0.001% to 3% (w/w) antioxidant and oxidatively transformed carotenoid.

48. A composition comprising 0.001% to 3% (w/w) antioxidant and 2-methyl-6-oxo-2,4-heptadienal.